

In the Claims

1. (Currently amended) A method of producing a winding for a high voltage transformer including the steps of:

forming a predetermined number of spaced conductor winding groups joined together to form a single winding of the transformer; and

winding each spaced winding group as a solenoid-type winding having, in section, a plurality of interwoven axial columns and radial rows from a predetermined number of turns of conductor.

2. (Original) A method according to claim 1 further including the step of selecting the number of spaced winding groups and number of turns of each winding group such that a predetermined voltage stress for a given operating voltage of the transformer is not exceeded.

3. (Previously presented) A method according to claim 1 wherein the winding is formed from high temperature superconductors.

4. (Previously presented) A method according to claim 1 including the step of forming each winding group from a single uninterrupted length of conductor.

5. (Previously presented) A method according to claim 1 wherein each conductor turn includes a plurality of conductors.

6. (Previously presented) A method according to claim 1 wherein the winding groups are spaced and stacked vertically.

7. (Original) A method according to claim 6 including the step of winding each winding group in

sequence vertically.

8. (Currently amended) A winding for high voltage transformer having a predetermined number of spaced winding groups joined together to form a single winding of the transformer, each spaced winding group being solenoid wound having, in section, a plurality of interwoven axial columns and a plurality of radial rows from a predetermined number of turns.

9. (Original) A winding according to claim 8 wherein the number of spaced winding groups and number of turns of each winding group are selected such that a predetermined voltage stress for a given operating voltage of the transformer is not exceeded.

10. (Previously presented) A winding according to claim 8 wherein the winding uses high temperature superconductors.

11. (Previously presented) A winding according to claim 8 wherein each winding group is formed from a single uninterrupted length of conductor.

12. (Previously presented) A winding according to claim 8 wherein each conductor turn includes a plurality of conductors.

13. (Previously presented) A winding according to claim 8 wherein the winding groups are spaced and stacked vertically.

14. (Original) A winding according to claim 13 wherein each winding group is wound in sequence vertically.

15. (Currently amended) A high voltage transformer comprising:

a winding including a predetermined number of spaced winding groups joined together to

form a single winding of the transformer, each spaced winding group being solenoid wound from a predetermined number of turns having, in section , a plurality of interwoven axial columns and radial rows.

16. (Original) A transformer according to claim 15 wherein the transformer is a superconducting transformer.